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MEDICAL SCHOOL

CALIFORNIA STATE BOARD OF HEALTH

Weekly

Bulletin

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GUY P. JONES
EDITOR

Season for Rocky Mountain Fever Nears.

Rocky Mountain spotted fever has existed in some portions of the northwestern United States ever since that part of the country was first settled. The disease is found in California but only in two or three of the border counties in the extreme northwestern part of the state. The disease is much more virulent in some localities than in others. There is no other disease in this country, equally severe, that is limited to so small a geographical section. The disease is of first importance in many northwestern communities, in one valley of Montana the mortality rate is 80 to 90 per cent. Strange to relate, the mortality rate in the adjoining state of Idaho is but 3.5 per cent. As nearly as can be determined the mortality rate for Rocky Mountain spotted fever for all states other than Montana and Idaho varies from 7 to 12 per cent. These rates are considered as too low for the reason that the records are incomplete in many places.

The disease is transmitted to man only by the wood tick, *Dermacentor venustus*. It is characterized by onset with chill, continued fever, severe pain in bones and muscles, headache and an eruption that appears first on the wrists, ankles and back, finally covering the whole surface of the body. It is a dangerous disease, frequently fatal and always serious.

The larvæ and nymphs of the wood tick feed upon small animals such as

the mountain rat, ground squirrel, woodchuck, pine squirrel, chipmunk, etc. The adults feed upon domestic animals such as horses, cattle and sheep and upon the large wild mammals such as deer, bear, coyote and mountain goat.

The virus is transmitted by both the wood tick and the rabbit tick. It is maintained by passage from stage to stage of these ticks and by new lines of infection started in previously uninfected ticks by feeding on infected hosts. The wood tick is the only known agent of human infection. The rabbit tick feeds only on rabbits and game birds. Wood ticks and rabbit ticks meet in common on rabbits. Game birds, by spreading rabbit ticks, assist in the spread of infection. The wood tick completes its life cycle in two years, feeding three times, first as larvæ, then as nymph and finally as adult, feeding at each stage on a separate host.

Control methods are directed against the larvæ and nymphs on rodents and the adult ticks on domestic animals. The methods employed consist of rodent destruction, dipping of domestic animals, restriction of grazing, hand picking and the application of repellants. The wood tick is a factor in the transmission of tularemia and tick paralysis (both in children and in sheep) as well as Rocky Mountain spotted fever. It is also suspected as a factor in the transmission of septic infection in man.

A parasite that feeds upon ticks was introduced into this country in 1926. It is too early to determine the success of the parasite in the United States.

In France, where the insect is native, ticks are practically exterminated in those places where the parasite is found. The Montana State Board of Entomology is hopeful of favorable results in the control of ticks in Montana by means of this parasite.



Health Officers Newly Appointed.

Mr. W. E. Godsell was recently appointed City Health Officer of Rio Vista to succeed Mrs. Margaret Lindsay.

Mr. George R. Sidwell was appointed January 1st to succeed Dr. H. R. King as City Health Officer of Winters.

Mr. John O. McAtee has been appointed City Health Officer of Oroville to succeed Mr. C. W. Toland.

Dr. Gordon M. Grundy at the beginning of the year became City Health Officer of Newport Beach in place of Capt. David L. Adams.

Dr. H. J. Wickman is now City Health Officer of Perris taking the place of Dr. D. W. Sheldon.

Dr. C. H. Barnes of Smith River was recently appointed Health Officer of Del Norte County in place of Dr. E. W. Hill.

Miss Beaunes Anderson is now City Health Officer of Beaumont, succeeding Mr. F. W. Whitney.

Dr. W. E. Coppedge, on January 10th, succeeded Dr. John Stile as City Health Officer of Alturas.

Upon the incorporation of Isleton, February 7th, Dr. J. H. Leimbach was appointed City Health Officer.



How Toronto Handles Garbage.

For ten years the city of Toronto with a population of 600,000 has maintained a system of garbage collection and disposal that has brought no public complaint. The *Toledo City Journal* has published a report of the Toronto garbage disposal method from which the following is extracted:

"First of all, it was discovered that the term 'garbage' to the housewife of Toronto does not mean a conglomeration of potato peelings, greasy meat scraps, table cleanings, slop, etc. Garbage in Toronto is an accumulation of material composed on the average of 65 per cent by weight of drained table and kitchen waste and 35 per cent by weight of combustible refuse, such as paper, wood, rags,

old shoes or anything else that will burn.

The city ordinances or by-laws of Toronto require the housewife to drain and wrap kitchen and table waste in paper. This is one of the real secrets of successful garbage collection and disposal in Toronto. The nuisance created by wet, sloppy and consequently disagreeable garbage is eliminated at the source. The Toronto garbage, or more specifically combustible household waste, is placed in tin receptacles from which it is collected by the city at least twice a week. Collection is made by use of horse-drawn vehicles, the bodies of which are made not of steel, but of wood. The sides of the garbage wagon are not composed of solid material but are slatted. When a wagon is loaded, a tarpaulin is placed on the top, not to keep the odors from arising out of the wagon, but to hold the material in the wagon and to prevent the action of the elements on the contents. A wagon load of garbage in Toronto has the appearance of being a load of rubbish composed chiefly of paper. Only a close examination would reveal the drained household waste.

TRAILER HAULING.

The loaded wagons in each of the numerous collection districts are drawn to a central point where the horses are unhitched and attached to empty wagons. This naturally decreases the length of the haul. When several loaded wagons have been delivered to a certain central point, they are formed into a train and by means of a tractor drawn to the garbage disposal plants. The collection centers vary from time to time and no one center is said to be in continuous or even frequent use.

Ashes and other incombustible materials are also collected by the street department twice a week in Toronto.

METHOD OF INCINERATION.

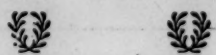
In the Canadian city the garbage is taken to one of the two incinerator plants, one of which is centrally located from the standpoint of collection district, where without the aid of any supplementary fuel it is completely consumed, except for some incombustible materials which may happen to be placed in the refuse cans. An explanation of the system of burning the garbage at the Toronto incinerators would not be appreciated without observation of the plants in actual operation or at least without photographs of the various steps of operation. It is sufficient to say that the garbage is burnt in large furnaces at a high temperature which consumes all obnoxious odors and gases. In the combustion chamber in which the odors and

gases are broken down, the temperature ranges from 1200 to 1600 degrees F. The system of ventilation used in the plant, especially in the new plant, sucks all odors which may arise from the garbage on the dumping floor and from the smoke emitted from the open furnace doors when the garbage is being spread over the grates into the combustion chambers within the furnaces. The supply of air to the furnace is pre-heated by heat supplied through the burning of the gases in the combustion chambers. The temperature is maintained so high that the ashes remaining constitute only 10 to 11 per cent of the garbage burned. The ashes, except for tin cans and other combustible material, are fine as dust and are used for filling in low ground.

The older of the two plants, which have been in continuous operation for ten years, is situated within the residential district. Within two blocks of the plant are a hospital, a public school, a church and a Y. M. C. A. building. From what the visitors to the neighborhood of this plant could find, there were no objections on part of nearby residents to the location of the plant. The Director of the Toronto Bureau of Municipal Research stated that to his knowledge, during the ten years operation of the older plant, not one complaint had been made by or through any newspaper about the operation or location of the incinerator. This, evidently, proves that its operation has in no way created a nuisance.

Those who claim to be familiar with the Toronto situation state that the city made one mistake in its garbage disposal system. This refers to the location of the new incinerator, which has been in operation for two years. Because the city council insisted that the incinerator be constructed on city-owned land, it was not located advantageously from the standpoint of length of haul. If the plant had been centrally located in the district which it serves, Toronto would be saving \$30,000 a year in hauling costs, it was stated.

The cost of incineration for the older of the two plants in 1925 was approximately \$1.50 per ton exclusive of depreciation and capital charges. In 1926, it was about \$1.35 per ton. At the new incinerator with less maintenance expenses, the cost of disposal in 1926 was approximately \$1.05 per ton. The cost of collecting and hauling the garbage was \$1.98 per ton in 1925. So the total cost of garbage collection and disposal in Toronto, 1925, was \$3.65 per ton.



In nothing do men more nearly approach the gods than in giving health to men.—Cicero.

Healdsburg Health Officer Vaccinates.

Dr. J. Walter Seawell, city health officer of Healdsburg, has conducted a successful campaign for vaccination against smallpox of the residents of his city. No less than 1147 such vaccinations were done during a period of three weeks. A special vaccination clinic was established in the city hall, where many persons were vaccinated. Many high school and grammar school students were also immunized against this disease which has been quite prevalent recently in the counties of the northern coast district.



MORBIDITY.*

Diphtheria.

132 cases of diphtheria have been reported, as follows: Alameda County 1, Alameda 1, Albany 1, Berkeley 9, Oakland 7, San Leandro 1, Butte County 3, Chico 3, Angels Camp 1, Fresno County 1, Humboldt County 4, Eureka 1, Imperial 1, Kern County 3, Los Angeles County 9, Beverly Hills 1, Compton 2, Long Beach 2, Los Angeles 42, Redondo 1, Hawthorne 1, Fullerton 1, Orange 1, Santa Ana 1, Sacramento 2, Hollister 1, San Bernardino County 1, Ontario 1, San Diego County 1, San Diego 4, San Francisco 10, Stockton 3, San Mateo County 1, Daly City 2, Santa Clara County 1, San Jose 1, Sonoma County 1, Stanislaus County 1, Tulare County 1, Visalia 2, Ventura 1.

Scarlet Fever.

244 cases of scarlet fever have been reported, as follows: Albany 1, Berkeley 3, Oakland 21, Chico 2, El Dorado County 2, Fresno 1, Humboldt County 1, Inyo County 3, Bishop 1, Kern County 4, Kings County 1, Los Angeles County 10, Arcadia 1, Beverly Hills 3, Compton 2, Covina 2, El Segundo 1, Glendale 4, Glendora 1, Hermosa 1, Huntington Park 1, Inglewood 1, Long Beach 14, Los Angeles 54, Manhattan Beach 1, Monrovia 2, Pasadena 3, Pomona 1, Redondo 3, Santa Monica 4, South Pasadena 2, Hawthorne 1, Maywood 1, Orange County 2, Anaheim 1, Huntington Beach 2, Orange 1, Santa Ana 3, Riverside 1, Sacramento 2, San Bernardino County 3, Redlands 3, Coronado 1, San Diego 10, San Francisco 14, San Joaquin County 2, Stockton 5, San Luis Obispo County 7, San Mateo County 1, Redwood City 1, Santa Clara County 9, Gilroy 5, Mountain View 3, San Jose 9, Stanislaus County 1, Modesto 1, Turlock 1, Yuba City 1, Sonoma 1, Tulare County 1.

Measles.

3186 cases of measles have been reported, as follows: Alameda County 2, Alameda 6, Albany 10, Berkeley 192, Emeryville 3, Oakland 102, San Leandro 5, Sutter Creek 10, Butte County 2, Chico 6, Gridley 13, Angels Camp 1, Colusa County 5, Pittsburg 5, El Dorado County 2, Fresno County 29, Fresno 17, Reedley 1, Orland 7, Willows 2, Humboldt County 6, Eureka 7, Calxico 1, Kern County 45, Bakersfield 6, Taft 1, Kings County 3, Hanford 18, Lemoore 1, Lakeport 15, Susanville 6, Los Angeles County 87, Arcadia 4, Beverly Hills 6, Burbank 2, Compton 3, El

*From reports received on February 28th and March 1st for week ending February 26th.

Monte 3, El Segundo 1, Glendale 38, Huntington Park 40, Inglewood 13, Long Beach 196, Los Angeles 830, Monrovia 2, Montebello 2, Pasadena 80, Pomona 2, Redondo 12, San Gabriel 4, Santa Monica 29, Whittier 16, Torrance 1, Lynwood 6, Hawthorne 1, South Gate 4, Monterey Park 6, Maywood 6, South Pasadena 2, Tujunga 1, Madera 9, Marin County 2, San Rafael 2, Sausalito 4, Merced County 4, Monterey County 21, Salinas 1, Napa 1, Nevada City 3, Orange County 86, Anaheim 12, Brea 1, Fullerton 9, Santa Ana 19, La Habra 2, Lincoln 25, Riverside County 7, Riverside 5, Sacramento 49, North Sacramento 3, Hollister 2, San Bernardino County 2, Chino 1, Colton 6, Redlands 4, San Bernardino 6, San Diego County 47, Chula Vista 5, Coronado 2, National City 27, San Diego 331, San Francisco 123, San Joaquin County 16, Stockton 21, San Luis Obispo County 2, San Luis Obispo 1, San Mateo County 1, Redwood City 7, Santa Barbara 29, Santa Maria 6, Santa Clara County 4, Gilroy 37, Los Gatos 8, Mountain View 5, Palo Alto 48, San Jose 15, Sunnyvale 6, Santa Cruz County 22, Watsonville 17, Solano County 3, Vacaville 2, Sonoma County 3, Stanislaus County 3, Modesto 2, Turlock 7, Yuba City 52, Trinity County 1, Tulare County 6, Dinuba 20, Lindsay 11, Tuolumne County 4, Sonora 6, Yolo County 42, Davis 1, Woodland 28, Yuba County 3.

Smallpox.

36 cases of smallpox have been reported, as

follows: Oakland 2, San Leandro 2, Kings County 1, Merced County 2, Riverside County 3, Corona 6, San Francisco 1, Stockton 4, Santa Clara County 1, Stanislaus County 6, Turlock 2.

Typhoid Fever.

Five cases of typhoid fever have been reported, as follows: Long Beach 1, Los Angeles 3, San Joaquin County 1.

Whooping Cough.

111 cases of whooping cough have been reported, as follows: Alameda County 2, Berkeley 18, Oakland 17, Eureka 5, Los Angeles County 3, Glendale 2, Huntington Park 1, Long Beach 9, Los Angeles 13, San Gabriel 1, South Pasadena 1, Riverside 3, San Diego County 3, Coronado 6, San Diego 6, San Francisco 19, Benicia 1, Tulare County 1.

Meningitis (Epidemic).

Two cases of epidemic meningitis have been reported, as follows: Sacramento 1, Los Angeles 1.

Encephalitis (Epidemic).

Two cases of epidemic encephalitis have been reported, as follows: Calaveras County 1, Napa 1.

Poliomyelitis.

One case of poliomyelitis has been reported from San Jose.

COMMUNICABLE DISEASE REPORTS.

Disease	1927				1926			
	Week ending			Reports for week ending Feb. 26 received by Mar. 1	Week ending			Reports for week ending Feb. 27 received by Mar. 2
	Feb. 5	Feb. 12	Feb. 19		Feb. 6	Feb. 13	Feb. 20	
Anthrax	0	0	0	0	0	0	0	0
Botulism	0	0	0	0	0	0	0	0
Chickenpox	517	738	991	808	358	470	491	449
Diphtheria	172	144	143	132	127	96	120	121
Dysentery (Bacillary)	0	0	7	0	0	0	0	0
Encephalitis (Epidemic)	1	2	1	2	3	2	1	0
Gonococcus Infection	146	141	91	103	140	87	84	61
Influenza	40	157	68	79	574	527	308	383
Jaundice (Epidemic)	7	0	3	1	0	0	0	0
Leprosy	0	0	0	0	0	0	0	2
Malaria	0	0	0	0	1	1	1	3
Measles	2592	2547	3011	3186	66	89	108	90
Meningitis (Epidemic)	9	7	8	2	10	12	7	9
Mumps	248	269	239	220	218	292	308	306
Paratyphoid Fever	0	2	0	0	0	0	0	0
Pneumonia	69	86	72	86	99	144	71	83
Poliomyelitis	2	2	2	1	2	6	4	1
Rabies (Animal)	11	20	8	12	4	8	6	8
Rabies (Human)	0	0	0	0	0	0	0	0
Rocky Mt. Spotted Fever	0	0	0	0	0	0	0	0
Scarlet Fever	321	288	295	244	171	186	147	155
Smallpox	20	28	35	30	187	205	133	125
Syphilis	167	153	143	106	174	137	97	88
Tetanus	2	0	1	0	0	0	0	1
Trachoma	36	14	17	0	3	5	6	38
Trichinosis	0	1	2	0	0	0	1	0
Tuberculosis	162	197	187	172	212	168	208	122
Typhoid Fever	4	10	5	5	13	12	9	6
Typhus Fever	0	0	0	0	0	0	0	1
Whooping Cough	116	105	121	111	53	63	51	58
Totals	4642	4911	5450	5300	2415	2480	2161	2110